

# *Executive Summary*

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The National Defense Authorization Act for Fiscal Year 1994, Public Law No. 103-160, Section 1703 (50 USC 1522), mandates the coordination and integration of all Department of Defense chemical and biological (CB) defense programs. As part of this coordination and integration, the Secretary of Defense is directed to submit an assessment and a description of plans to improve readiness to survive, fight and win in a nuclear, biological and chemical (NBC) contaminated environment. This report contains modernization plan summaries that highlight the Department's approach to improve current NBC defense equipment and resolve current shortcomings in the program. *50 USC 1522 has provided the essential authority to ensure the elimination of unnecessarily redundant programs, focusing funds on DoD and program priorities, and enhancing readiness.*

The objective of the Department of Defense (DoD) Chemical and Biological Defense Program (CBDP) is to enable our forces to survive, fight, and win in a chemically or biologically contaminated warfare environment. The DoD CBDP provides development and procurement of systems to enhance the ability of U.S. forces to deter and defend against CB agents during regional contingencies. The probability of U.S. forces encountering CB agents during worldwide conflicts remains high. An effective defense reduces the probability of a CB attack, and if an attack occurs, it enables U.S. forces to survive, continue operations, and win. Scientific, technological, and resource limitations remain in preventing U.S. forces from having complete full dimensional protection and meeting all requirements for two nearly simultaneous Major Theater Wars. The unique physical, toxicological, destructive, and other properties of each threat requires that operational and technological responses be tailored to the threat. Nevertheless, significant progress has been made in overcoming these limitations since the establishment of the DoD CBDP. Still, U.S. forces remain the best protected forces in the world for surviving and conducting operations in chemically or biologically contaminated environments.

During the past year, DoD took several steps to ensure the protection of U.S. forces against both immediate and future chemical and biological threats. This report details DoD's current and planned capabilities. However, highlights from the past year include initiating immunization of all U.S. forces with the licensed anthrax vaccine—a deadly biological warfare agent, deployment of advanced biological detection equipment during Operation Desert Thunder, and continued enhancement of DoD CBDP funds to protect against validated and emerging threats through the far-term future.

Numerous rapidly changing factors continually influence the program and its management. These factors include declining DoD resources, planning for warfighting support to numerous regional threat contingencies, the evolving geopolitical environment resulting from the breakup of the Soviet Union, the entry into force of the Chemical Weapons Convention, and continuing proliferation of NBC weapons. To minimize the impact of use of NBC weapons on our forces, the DoD CBDP will continue to work towards increasing the defensive capabilities of Joint Forces to survive and continue the mission during conflicts that involve the use of NBC

weapons. NBC defense programs are managed jointly under the oversight of a single office within DoD.

The program continues to implement congressional direction to improve jointness and reflects an integrated DoD developed program. This year's program continues funding to support the highest priority counterproliferation initiatives. During the past year, the Department reviewed its capabilities to protect against the asymmetric threats from chemical and biological weapons. As a result of the review, funding was identified to enhance and accelerate high-payoff technologies and advanced CB defense systems. The FY00–01 President's Budget Submission includes \$380 million in increased research and development funding for biological warfare defense and vaccines over the FY 2000–05 Future Years Defense Program (FYDP), as well as additional FY 1999 Emergency Supplemental funding to procure CB defense equipment for the Guard and Reserves to support the Consequence Management mission. Moreover, the Department continues to procure new CB defense equipment for our forces, due in large measure to the May 1997 *Report of the Quadrennial Defense Review* (QDR) recommendation to increase planned spending on counterproliferation by \$1 billion over the FY 1999–2003 program period, of which \$732 million was allocated to the DoD CBDP.

The DoD CBDP invests in technologies to provide improved capabilities that have minimal adverse impact on our warfighting potential. Joint and Service unique programs provide capabilities to support the framework of the three commodity areas of CB defense: Contamination Avoidance (detection, identification, warning/reporting, reconnaissance), Protection (individual, collective, medical support), and Decontamination. All of these capabilities integrated together as a system-of-systems are essential to avoid contamination and to sustain operational tempo on an asymmetric battlefield. Moreover, sound Joint doctrine and realistic training remain fundamental to our defense against chemical and biological weapons. In summary, the DoD CBDP is focusing on a jointly integrated, balanced approach to obtaining needed capabilities for our forces within affordability constraints.

## OVERVIEW OF REPORT

The **INTRODUCTION** provides a background of the rationale and purpose of the DoD Chemical and Biological Defense Program (CBDP). This section summarizes the key counter-proliferation priorities and the current chemical and biological warfare threats to U.S. forces. Intelligence documents tailored to the threat are essential for developing and updating requirements for chemical and biological defense programs. Each chemical and biological defense research, development, and acquisition effort funded within the program responds to a defined or validated threat. Variations among chemical and biological agents and each agent's unique physical, toxicological, destructive, and other properties such as means of delivery require that operational and technological responses be tailored to the threat. Intelligence efforts continue to emphasize collection and analysis of nations' "dual-use" chemical and biological industrial capabilities and develop the indications and warning of adversarial use of dual-use capabilities.

**CHAPTER 1** describes the accomplishments, processes, and issues related to DoD CBDP management and oversight. Since the program's inception, DoD has made significant progress in improving the overall joint management and coordination of the NBC defense program, including integration of medical and non-medical chemical and biological defense programs. *50 USC 1522 has been a critical tool for ensuring the elimination of redundant programs, focusing funds on program priorities, and enhancing readiness.* This chapter outlines the changes within the oversight and management structure that have occurred as a result of the Defense Reform Initiative and the establishment of the Defense Threat Reduction Agency.

**CHAPTER 2** provides information on non-medical NBC defense requirements and research and development programs. Requirements and the status of research and development assessments are described within the framework of the functional areas of NBC defense.

**CHAPTER 3** provides information on medical NBC defense requirements and on research and development programs. Medical technologies are an integral part of providing individual protection both prior to, during and after a chemical or biological attack.

**CHAPTER 4** provides an analysis of NBC defense logistics posture. The analysis reviews the status of quantities, characteristics, and capabilities of all fielded NBC defense equipment, industrial base requirements, procurement schedules, and problems encountered. Much of the information is based on the model of Joint Chemical Defense Equipment Consumption Rates (JCHEMRATES IV). Additional information is derived from the Joint NBC Defense Logistics Support Plan.

**CHAPTER 5** assesses the status of NBC defense training and readiness conducted by the Services. Each of the Services' training standards and programs is reviewed. In accordance with Section 1702 of P.L. 103-160 (50 USC 1522) all chemical and biological warfare defense training activities of the Department of Defense have been consolidated at the United States Army Chemical School. This chapter also provides information on the move of the Chemical School from Fort McClellan, Alabama to Fort Leonard Wood, Missouri.

**CHAPTER 6** provides information on the status of DoD efforts to implement the Chemical Weapons Convention (CWC), which was ratified by the United States and entered into force during 1997. This chapter also includes a summary of plans and activities to provide assistance to other countries in response to an appeal by another State Party to the CWC, pursuant to Article X of the CWC.

Finally, there are several **ANNEXES** to this report. **Annexes A through D** provide detailed information on Joint and Service-unique NBC defense equipment, including contamination avoidance, protection, decontamination, and medical programs. Detailed descriptions are provided for systems and equipment that have been fielded, are in production, or under development. **Annex E** provides a summary of funds appropriated, budgeted, and expended by the DoD CBDP. One of the successes of the DoD NBC Defense Program has been the consolidation of all DoD NBC Defense RDT&E and procurement program funds under defense-wide program elements, rather than throughout numerous Service accounts. **Annex F** provides a reference to NBC defense related sites on the internet. **Annex G** provides a statement regarding chemical and biological defense programs involving human subjects as required by 50 USC 1523. As detailed in the annex, no such testing has been conducted in over two decades and none is planned. **Annex H** provides the text of the Congressional language requiring this report. **Annex I** provides a list of the many acronyms and abbreviations that are used throughout this report.